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pt. 4c.

15 SEP 1949

IN D.O.

## REPORT ON OIL ENGINE ELECTRIC GENERATOR SETS

No. 588

9 SEP 1949

Date of writing Report 19 When handed in at Local Office 19 Port of NOTTINGHAM.

No. in Survey held at Lincoln Date, First Survey Last Survey 19

eg. Book. on the Single Twin Triple Quadruple Screw vessel M.V. LUMEN 1197 Number of Visits

Tons Gross 10146 Net 5865

uilt at By whom built Yard No. When built

ners To order of Sunderland Forge & Eng. Co. Ltd., Port belonging to 52889/17/480020. B.04812.

Engines made at Lincoln By whom made Ruston & Hornsby Ltd., Contract No. When made 1949

Generators made at Sunderland. By whom made Sunderland Forge & Eng. Co. Ltd. Contract No. When made 1949

of Sets 1 Engine Brake Horse Power 30 M.N. as per Rule Total Capacity of Generators 15 Kilowatts.

Set intended for essential services.

**IL ENGINES &c.**—Type of Engines 3VRHZ. Eng. No. 271020 2 or 4 stroke cycle 4 Single or double acting SA

Maximum pressure in cylinder 800 lbs. Diameter of cylinders 4 1/2" Length of stroke 5 1/2" No. of cylinders 3 No. of cranks 3

can indicate 112.3 Firing order in cylinders 1-3-2 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 6.15/16"

there a bearing between each crank Yes Moment of inertia of flywheel (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>) 1164 lbs. ft. 2 Revolutions per minute 1000

flywheel dia 26" Weight 420 lbs. Means of ignition Compression Kind of fuel used Diesel Oil

Crank Shaft, dia. of journals as per Rule 3" Crank pin dia. 3" Crank Webs Mid. length breadth 3 1/2" Thickness parallel to axis -

Mid. length thickness 1.11/16" Thickness round eye hole -

flywheel Shaft, diameter as per Rule C shaft. Intermediate Shafts, diameter as fitted General armature, moment of inertia (16 m<sup>2</sup> or Kg.-cm.<sup>2</sup>)

Means provided to prevent racing of the engine when declutched Yes Means of lubrication Forced Kind of damper if fitted -

Are the cylinders fitted with safety valves No Are the exhaust pipes and silencers water cooled or lagged with non-conducting material

oling Water Pumps, No. one, engine driven. Is the sea suction provided with an efficient strainer which can be cleared within the vessel.

bricating Oil Pumps, No. and size one 150 gals./150 Engine driven.

Compressors, No. No. of stages Diameters Stroke Driven by

evenging Air Pumps, No. Diameter Stroke Driven by

**R RECEIVERS:**—Have they been made under Survey State No. of Report or Certificate

each receiver, which can be isolated, fitted with a safety valve as per Rule

the internal surfaces of the receivers be examined What means are provided for cleaning their inner surfaces.

here a drain arrangement fitted at the lowest part of each receiver

h Pressure Air Receivers, No. Cubic capacity of each Internal diameter thickness

less, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules

rting Air Receivers, No. Total cubic capacity Internal diameter thickness

less, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules

**ELECTRIC GENERATORS:**—Type Drip proof. CW. CR, Machine No. 41336.

ssure of supply 110 volts. Full Load Current 136.5 Amperes. Direct or Alternating Current D.C.

Alternating current system, state the periodicity Has the Automatic Governor been tested and found as per Rule when full load is suddenly thrown

nd off Yes Generators, are they compounded as per Rule Yes is an adjustable regulating resistance fitted in series with each shunt field Yes

all terminals accessible, clearly marked, and furnished with sockets Yes Are they so spaced

ielded that they cannot be accidentally earthed, short circuited, or touched Yes Are the lubricating arrangements of the generators as per Rule Yes

he generators are under 100 kw. full load rating, have the makers supplied certificates of test and do the results comply with the requirements Yes

he generators are 100 kw. or over have they been built and tested under survey

ills of driven machinery other than generator

**4NS.**—Are approved plans forwarded herewith for Shafting 13.4.43. Receivers Separate Tanks

(If not, state date of approval)

he Torsional Vibration characteristics if applicable been approved Not applicable. Armature shaft Drawing No.

(state date of approval)

**ARE GEAR** To rule requirements.

The foregoing is a correct description,

Ruston &amp; Hornsby Limited.

Manufacturer.

Engineering Div.



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Dates of Survey while building { During progress of work in shops - - } 21.3.49., 18.7.49.  
{ During erection on board vessel - - }  
Total No. of visits 2

Dates of Examination of principal parts—Cylinders..... Covers..... Pistons..... Piston rods.....

Connecting rods..... Crank and Flywheel shafts..... Intermediate shafts.....

Crank shaft { Material..... Tensile strength 40/45 Tons/sq. inch.  
Elongation..... Identification Marks LL.K4020E. TDS. BW.4718.

Flywheel shaft, Material..... Identification Marks.....

Identification marks on Air Receivers.....

Is this machinery duplicate of a previous case..... Yes If so, state name of vessel..... Standard.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.).....

This engine has been built under Special Survey, in accordance with the approved plans and the rules of the Society, materials and workmanship being good.

On completion, the generating set was tested under working conditions in shops and the governing tested with satisfactory results.

The set has been forwarded to Sunderland for installation on board the vessel.....

This generating set has been securely fitted aboard, tried out under working conditions and found satisfactory.

*W. Smith for J. B. Smith*

The amount of Fee ... £ 4 : 0 : 0 { When applied for 7/2/ 1949 .  
Travelling Expenses (if any) £ : : { When received 19 .....

Committee's Minute ... 1 SEP 1950

Assigned

*See F.E. mch. rpt*



Surveyor to Lloyd's Register of Shipping.

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